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Shohei Yamada

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NIXON & VANDERHYE, PC  
901 NORTH GLEBE ROAD, 11TH FLOOR  
ARLINGTON, VA 22203

EXAMINER

DEAN, RAYMOND S

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Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/660,756	<b>Applicant(s)</b> YAMADA ET AL.	
	<b>Examiner</b> Raymond S. Dean	<b>Art Unit</b> 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1 - 46 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 - 46 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date : _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 8 recites the limitation "**the** external recording server" in lines 3 – 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: a detector structure for detecting when the broadcast signal cannot be received. Claim 8 is an apparatus claim thus there needs to be a detector for detecting when the broadcast signal cannot be received.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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3. Claim 17 is rejected under 35 U.S.C. 102(b) as being anticipated by Koyakata (JP 2002185900).

Regarding Claim 17, Koyakata teaches a recording server comprising: a broadcast signal receiving portion for receiving broadcast signals (Figure 1, Abstract); a receiving signal recording portion for receiving broadcast receiving information acquired from the broadcast signals (Abstract); and a control portion for reporting recording commands or playback commands to said receiving signal recording portion when a recording command or a playback command is received over a communication network (Abstract, recording and reproduction reservations are the record and playback commands), wherein said recording server sends said playback information over said communication network when playback commands are received over said communication network (Abstract).

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 10, 24 – 30, 32 – 46 are rejected under 35 U.S.C. 102(e) as being anticipated by Engstrom (US 7,065,333).

Regarding Claim 10, Engstrom teaches an information terminal device comprising a broadcast signal receiving function and a communication function, wherein a currently received broadcast signal is recorded when an outgoing or incoming call of a communication occurs (Figure 8, Cols. 10 lines 52 – 67, 11 lines 1 – 3).

Regarding Claim 24, Engstrom teaches a broadcast recording method for recording a broadcast program viewed or recorded on a mobile communication device containing communication functions or broadcast receiving functions by utilizing a program recording device containing a receiving function (Figure 5, Cols. 8 lines 46 – 50, lines 51 – 55, 10 lines 52 – 67, 11 lines 1 – 3, there will be a data storage device that receives and records the broadcast data), wherein said method comprises: a video-recording channel information receiving step for receiving as video-recording channel information, the broadcast program channel information sent from a mobile communication device and recorded or viewed on said communication device (Figure 5, Cols. 2 lines 3 – 4, 8 lines 51 – 55, 10 lines 36 – 39, the mobile device can received broadcasts from another mobile device via the wireless network (530)); a user control information recording step for recording video-recording channel information received in said video-recording channel information receiving step that corresponds to said user or mobile communication device (Figure 7, Col. 10 lines 36 – 39, the channels are scanned, said channels comprise broadcast information such as video); an interruption source detecting step for detecting the cause that the user stops recording or viewing a program on said mobile communication device (Figure 8, Cols. 10 lines 52 – 67, 11

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lines 1 – 3); a recording information command generating step for generating recording command information containing said video-recording channel information of said user or mobile communication device that is recorded in said user control information recording step, when an interruption source is detected in said interruption source detecting step (Figure 8, Cols. 10 lines 52 – 67, 11 lines 1 – 3, there is a command to asynchronously record the broadcast, in order to record the desired broadcast the channel will be known); and a recording command information transmitting step for sending the recording command information generated in said recording information command generating step to said program recording device and for recording said video-recording channel information of the broadcast program in said program recording device (Figure 8, Cols. 10 lines 52 – 67, 11 lines 1 – 3, there is a command to asynchronously record the broadcast).

Regarding Claim 25, Engstrom teaches all of the claimed limitations recited in Claim 24. Engstrom further teaches wherein said interruption source detecting step is a call detection step for detecting an outgoing or incoming call for a mobile communication device (Cols. 10 lines 52 – 67, 11 lines 1 – 3).

Regarding Claim 26. Engstrom teaches all of the claimed limitations recited in Claim 25. Engstrom further teaches a call termination detection step for detecting termination of at least one of either an incoming or outgoing call detected by said call detection step (Cols. 10 lines 52 – 67, 11 lines 1 – 3); and a recording notification step for notifying said mobile communication device of the recording of said broadcast program based on recording command information generated by said recording

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command information generating step based on said call termination detection step (Cols. 10 lines 29 – 31).

Regarding Claim 27, Engstrom teaches all of the claimed limitations recited in Claim 25. Engstrom further teaches a call termination detection step for detecting termination of at least one of either an incoming or outgoing call detected by said call detection step (Cols. 10 lines 52 – 67, 11 lines 1 – 3); a recording notification/inquiry step for notifying said mobile communication device of recording of a broadcast program based on recording command information generated by said recording command information generating step (Cols. 10 lines 29 – 31), and for inquiring on whether or not said recorded broadcast program is necessary based on said call termination detection step (Col. 10 lines 29 – 33); a record deleting command information generating step for generating deleting command information for said broadcast program when a reply that said recording is not needed is sent from said mobile communication device in response to said recording notification/inquiry step (Cols. 8 lines 46 – 50, a typical PDA allows a user to delete data from data storage); and a record deleting command information transmitting step for transmitting record deleting command information generated in said record deleting command information generating step to said program recording device, and deleting said broadcast program from said broadcast recording device (Cols. 8 lines 46 – 50, a typical PDA allows a user to delete data from data storage).

Regarding Claim 28, Engstrom teaches all of the claimed limitations recited in Claim 24. Engstrom further teaches a terminal status information-receiving step for

receiving terminal status information showing terminal status of its own device reported from said mobile communication device (Col. 10 lines 17 – 21, a determination of the status of the mobile device is made); and a recording necessity detection step for detecting the necessity level for recording a broadcast program viewed or recorded on said mobile communication device, from terminal status information received by said terminal status information receiving step (Col. 10 lines 22 – 29).

Regarding Claim 29, Engstrom teaches all of the claimed limitations recited in Claim 28. Engstrom further teaches wherein said terminal status information receiving step periodically receives in synchronization with preset time terminal status information showing terminal status of its own device reported from said mobile communication device (Figure 7, the status of the mobile device is checked periodically as shown by the flow chart in Figure 7).

Regarding Claim 30, Engstrom teaches all of the claimed limitations recited in Claim 28. Engstrom further teaches wherein said terminal status information receiving step constantly receives terminal status information as updated information after a change in terminal status is reported from said mobile communication device during terminal status changes (Figure 7, when the mobile changes from a status of in use to not in use said new status will be checked constantly as shown by the flow chart in Figure 7).

Regarding Claim 32, Engstrom teaches all of the claimed limitations recited in Claim 28. Engstrom further teaches a recording necessity end detection step for detecting canceling of the necessity for recording a broadcast program viewed or



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recorded on said mobile communication device, from terminal status information received in said terminal status information receiving step (Col. 10 lines 22 – 29); and a recording notification step for notifying said mobile communication device of recording of a broadcast program based on recording command information generated by said recording command information generating step based on detection of end in said recording necessity end detection step (Col. 10 lines 29 – 31).

Regarding Claim 33, Engstrom teaches all of the claimed limitations recited in Claim 28. Engstrom further teaches a recording necessity end detection step for detecting canceling of the necessity for recording a broadcast program viewed or recorded on said mobile communication device, from terminal status information received in said terminal status information receiving step (Col. 10 lines 22 – 29); a recording notification/inquiry step for notifying said mobile communication device of recording of a broadcast program based on recording command information generated by said recording command information generating step, based on end detection by said recording necessity end detection step (Col. 10 lines 29 – 31), and also inquiring on whether or not said recorded broadcast program is necessary (Col. 10 lines 29 – 33); a record deleting command information generating step for generating delete command information for said recording when a reply that said recording is not needed is sent from said mobile communication device in response to said recording notification/inquiry step (Cols. 8 lines 46 – 50, a typical PDA allows a user to delete data from data storage); and a record deleting command information transmitting step for transmitting record deleting command information generated in said record deleting

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command information generating step to said program recording device, and deleting said broadcast program recorded in said broadcast recording device (Cols. 8 lines 46 – 50, a typical PDA allows a user to delete data from data storage).

Regarding Claim 34, Engstrom teaches all of the claimed limitations recited in Claim 24. Engstrom further teaches wherein said video-recording channel information receiving step periodically receives in synchronization with preset time channel information on the broadcast program sent from a mobile communication device and viewed or recorded on said mobile communication device (Figure 5, Col. 8 lines 51 – 55, the mobile device can received broadcasts periodically from another mobile device via the wireless network (530)).

Regarding Claim 35, Engstrom teaches all of the claimed limitations recited in Claim 24. Engstrom further teaches wherein said video-recording channel information receiving step constantly receives channel information reported from mobile communication devices as updated information after a change in channels occurs (Figure 5, Col. 8 lines 51 – 55, the mobile device can received broadcasts periodically from another mobile device via the wireless network (530), in order for said broadcasts to be properly received there must be a constant update of the channels used for said broadcasts).

Regarding Claim 36, Engstrom teaches a broadcast recording method for broadcast programs for recording broadcast programs distributed on a communication line by streaming to a mobile communication device containing a streaming broadcast receiving function (Col. 2 lines 9 – 14, 8 lines 46 – 50), wherein said method

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comprises: a distribution step for streaming distribution of broadcast programs via a communication line to a mobile communication device (Col. 2 lines 9 – 14, 8 lines 46 – 50); an interruption source detection step for detecting the cause of interruption of receiving of broadcast programs distributed by streaming on a communication line to said mobile communication device (Cols. 10 lines 52 – 67, 11 lines 1 – 3); a distribution stop step for receiving the interruption source detection from the interruption source detection step, for stopping the streaming distribution to said mobile communication device (Cols. 10 lines 52 – 67, 11 lines 1 – 3), and for recording the ending position of the currently ended streaming (Cols. 10 lines 52 – 67, 11 lines 1 – 3, ending position is the point of interruption); an interruption source end detection step for detecting the end of source status detected in said interruption source detection step (Cols. 10 lines 52 – 67, 11 lines 1 – 3); and a distribution restart step for receiving the interruption end detection from said interruption source end detection step, and for restarting the streaming distribution of the broadcast program from the streaming ending position recorded in said distribution stop step (Cols. 10 lines 52 – 67, 11 lines 1 – 3).

Regarding Claim 37, Engstrom teaches all of the claimed limitations recited in Claim 36. Engstrom further teaches wherein said interruption source detection step is a call detection step for detecting an outgoing or incoming call on a mobile communication device, and said interruption source end detection step is call termination detection step for detecting termination of an outgoing or incoming call detected by said call detection step (Cols. 10 lines 52 – 67, 11 lines 1 – 3).

Regarding Claim 38, Engstrom teaches all of the claimed limitations recited in Claim 36. Engstrom further teaches wherein said interruption source detection step further comprises: a terminal status information-receiving step for receiving terminal status information showing the status of its own device reported from a mobile communication device (Col. 10 lines 17 – 21, a determination of the status of the mobile device is made); and a recording necessity detection step for detecting the need to record a broadcast program viewed or recorded by said mobile communication device, from terminal status information received by said terminal status information receiving step (Col. 10 lines 22 – 29), and said interruption source end detection step detects canceling of the necessity for recording a broadcast program viewed or recorded by said mobile communication device, from terminal status information received by said terminal status information receiving step (Col. 10 lines 22 – 29).

Regarding Claim 39, Engstrom teaches a communication control device connectable by a communication line to a program recording device containing broadcast receiving functions (Cols. 8 lines 46 – 50, 10 lines 60 – 61, the mobile device is the communication control device, said device comprises a data storage device for the recording of broadcasts, said data storage device is the program recording device) and a mobile communication device containing broadcast receiving functions and communication functions (Figure 5, Cols. 8 lines 51 – 55, the mobile device can communicate with other mobile devices via the wireless network (530)), wherein said communication control device comprises: a video-recording channel information receiving means for receiving as video-recording channel information, the broadcast

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program channel information sent from a mobile communication device and recorded or viewed on said communication device (Figure 5, Cols. 2 lines 3 – 4, 8 lines 51 – 55, 10 lines 36 – 39, the mobile device can received broadcasts from another mobile device via the wireless network (530)); a user control information recording means for recording video-recording channel information received in said video-recording channel information receiving step that corresponds to said user or mobile communication device (Figure 7, Col. 10 lines 36 – 39, the channels are scanned, said channels comprise broadcast information such as video); an interruption source detecting means for detecting the cause that the user stops recording or viewing a program on said mobile communication device (Figure 8, Cols. 10 lines 52 – 67, 11 lines 1 – 3); a recording information command generating means for generating recording command information containing said video-recording channel information of said user or mobile communication device that is recorded in said user control information recording means, when an interruption source is detected in said interruption source detecting means (Figure 8, Cols. 10 lines 52 – 67, 11 lines 1 – 3, there is a command to asynchronously record the broadcast, in order to record the desired broadcast the channel will be known); and a recording command information transmitting means for sending the recording command information generated in said recording information command generating means to said program recording device and for recording said video-recording channel information of the broadcast program into said program recording device (Figure 8, Cols. 10 lines 52 – 67, 11 lines 1 – 3, there is a command to asynchronously record the broadcast).

Regarding Claim 40, Engstrom teaches a communication control device connectable by a communication line to a program recording device containing broadcast receiving functions (Cols. 8 lines 46 – 50, 10 lines 60 – 61, the mobile device is the communication control device, said device comprises a data storage device for the recording of broadcasts, said data storage device is the program recording device) and a mobile communication device containing broadcast receiving functions and communication functions (Figure 5, Cols. 8 lines 51 – 55, the mobile device can communicate with other mobile devices via the wireless network (530)), wherein said communication control device comprises: a video-recording channel information receiving means for receiving as video-recording channel information, the broadcast program channel information sent from a mobile communication device and recorded or viewed on said communication device (Figure 5, Cols. 2 lines 3 – 4, 8 lines 51 – 55, 10 lines 36 – 39, the mobile device can received broadcasts from another mobile device via the wireless network (530)); a user control information recording means for recording video-recording channel information received in said video-recording channel information receiving step that corresponds to said user or mobile communication device (Figure 7, Col. 10 lines 36 – 39, the channels are scanned, said channels comprise broadcast information such as video); call detection means for detecting at least one of either an incoming or outgoing call for said mobile communication device (Figure 8, Cols. 10 lines 52 – 67, 11 lines 1 – 3); a recording information command generating means for accepting the detection of the outgoing or incoming call on the mobile communication device by said call detection means (Figure 8, Cols. 10 lines 52

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– 67, 11 lines 1 – 3), and for generating recording command information containing video-recording channel information based on video-recording channel information of the mobile terminal recorded in said user control information recording means (Figure 8, Cols. 10 lines 52 – 67, 11 lines 1 – 3, there is a command to asynchronously record the broadcast, in order to record the desired broadcast the channel will be known); and a recording command information transmitting means for sending the recording command information generated in said recording information command generating means to said program recording device and for storing said video-recording channel information of the broadcast program (Figure 8, Cols. 10 lines 52 – 67, 11 lines 1 – 3, there is a command to asynchronously record the broadcast).

Regarding Claim 41, Engstrom teaches a communication control device connectable by a communication line to a program recording device containing broadcast receiving functions (Cols. 8 lines 46 – 50, 10 lines 60 – 61, the mobile device is the communication control device, said device comprises a data storage device for the recording of broadcasts, said data storage device is the program recording device) and a mobile communication device containing broadcast receiving functions and communication functions (Figure 5, Cols. 8 lines 51 – 55, the mobile device can communicate with other mobile devices via the wireless network (530)), wherein said communication control device comprises: a video-recording channel information receiving means for receiving as video-recording channel information, the broadcast program channel information sent from a mobile communication device and recorded or viewed on said communication device (Figure 5, Cols. 2 lines 3 – 4, 8 lines 51 – 55,

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10 lines 36 – 39, the mobile device can received broadcasts from another mobile device via the wireless network (530)); a user control information recording means for recording video-recording channel information received in said video-recording channel information receiving step that corresponds to said user or mobile communication device (Figure 7, Col. 10 lines 36 – 39, the channels are scanned, said channels comprise broadcast information such as video); terminal status information-receiving means for receiving terminal status information showing terminal status of its own device reported from said mobile communication device (Col. 10 lines 17 – 21, a determination of the status of the mobile device is made); recording necessity detection means for detecting the necessity level for recording a broadcast program viewed or recorded on said mobile communication device, from terminal status information received by said terminal status information receiving means (Col. 10 lines 22 – 29); a recording information command generating means for accepting the detection results of the recording necessity detection means (Figure 8, Cols. 10 lines 52 – 67, 11 lines 1 – 3), and for generating recording command information containing video-recording channel information based on video-recording channel information of the user or mobile terminal recorded in said user control information recording means (Figure 8, Cols. 10 lines 52 – 67, 11 lines 1 – 3, there is a command to asynchronously record the broadcast, in order to record the desired broadcast the channel will be known); and a recording command information transmitting means for sending the recording command information generated in said recording information command generating means to said program recording device and for storing said video-recording channel



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information of the broadcast program (Figure 8, Cols. 10 lines 52 – 67, 11 lines 1 – 3, there is a command to asynchronously record the broadcast).

Regarding Claim 42, Engstrom teaches a communication control device for streaming distribution of a broadcast program by a communication line to a mobile communication device containing a streaming broadcast receiving functions (Col. 2 lines 9 – 14, 8 lines 46 – 50), comprising: interruption source detection means for detecting the status of the mobile communication device causing interruption of receiving of broadcast programs by streaming distribution (Cols. 10 lines 52 – 67, 11 lines 1 – 3); interruption source end detection means for detecting the end of interruption source detected by said interruption source detection means (Cols. 10 lines 52 – 67, 11 lines 1 – 3); distribution end position recording means for recording the streaming position distributed to said mobile communication device (Cols. 10 lines 52 – 67, 11 lines 1 – 3, ending position is the point of interruption); and streaming distribution means for receiving the interruption source end detection from said interruption source end detection means, and for stopping the streaming distribution to the mobile communication device (Cols. 10 lines 52 – 67, 11 lines 1 – 3), and along with recording the stream position at the end of the current stream distribution in said position recording means, for receiving the interruption source end detection from said interruption source end detection means and for restarting the streaming distribution from the distribution end stream position recorded in said position recording means (Cols. 10 lines 52 – 67, 11 lines 1 – 3).

Regarding Claim 43, Engstrom teaches a communication control device for streaming distribution of a broadcast program by a communication line to a mobile communication device containing a streaming broadcast receiving functions (Col. 2 lines 9 – 14, 8 lines 46 – 50), comprising: a call detection means for detecting at least either an outgoing or incoming call on a mobile communication device during streaming distribution of a broadcast program over a communication line (Cols. 10 lines 52 – 67, 11 lines 1 – 3); call termination detection means for detecting termination of an outgoing or incoming call detected by said call detection means (Cols. 10 lines 52 – 67, 11 lines 1 – 3); distribution end position recording means for recording the streaming position distributed to said mobile communication device (Cols. 10 lines 52 – 67, 11 lines 1 – 3, ending position is the point of interruption); and streaming distribution means for receiving detection of the incoming or outgoing call on a mobile communication device from said call detection means, and for stopping the streaming distribution to the mobile communication device (Cols. 10 lines 52 – 67, 11 lines 1 – 3), and along with recording the stream position at the end of the current stream distribution in said position recording means, for receiving the detection of call termination of incoming or outgoing calls by the call termination detection means and for restarting the streaming distribution from the distribution end stream position recorded in said position recording means (Cols. 10 lines 52 – 67, 11 lines 1 – 3).

Regarding Claim 44, Engstrom teaches a communication control device for streaming distribution of a broadcast program by a communication line to a mobile communication device containing a streaming broadcast receiving functions (Col. 2

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lines 9 – 14, 8 lines 46 – 50), comprising: terminal status information-receiving means for receiving terminal status information showing terminal status of its own device reported from said mobile communication device (Col. 10 lines 17 – 21, a determination of the status of the mobile device is made); recording necessity detection means for detecting the necessity level for recording a broadcast program viewed or recorded on said mobile communication device, from terminal status information received by said terminal status information receiving means (Col. 10 lines 22 – 29); recording necessity end detection means for detecting canceling of the necessity for recording a broadcast program viewed or recorded by said mobile communication device, from terminal status information received by said terminal status information receiving means (Col. 10 lines 22 – 29); distribution end position recording means for recording the streaming position distributed to said mobile communication device (Cols. 10 lines 52 – 67, 11 lines 1 – 3, ending position is the point of interruption); and streaming distribution means for receiving detection from said recording necessity detection means, and for stopping the streaming distribution to the mobile communication device (Cols. 10 lines 52 – 67, 11 lines 1 – 3), and along with recording the stream position at the end of the current stream distribution in said position recording means, for receiving detection from said recording necessity end detection means, and for restarting the streaming distribution from the distribution end stream position recorded in said position recording means (Cols. 10 lines 52 – 67, 11 lines 1 – 3).

Regarding Claim 45, Engstrom teaches all of the claimed limitations recited in Claim 24. Engstrom further teaches implementing the broadcast recording method on a computer (Col. 8 lines 46 – 50, typical mobile phones and PDAs comprise a processor that controls the functions of said mobile phone and PDA, said processor uses a program to operate).

Regarding Claim 46, Engstrom teaches all of the claimed limitations recited in Claim 24. Engstrom further teaches a recording medium readable by a computer loaded with a program for implementing the broadcast recording method (Col. 8 lines 46 – 50, typical mobile phones and PDAs comprise a processor that controls the functions of said mobile phone and PDA, said processor uses a program to operate, said program is stored in memory, which is a recording medium).

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1 – 4, 22 – 23, 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Engstrom (US 7,065,333) in view of Cahill (5,150,384).

Regarding Claim 1, Engstrom teaches a broadcast recording method utilizing a terminal device having broadcast signal receiving function and communication function

(Figure 5, Cols. 8 lines 46 – 50, lines 51 – 55), comprising: a call detection step for detecting an incoming or outgoing call during receiving of a broadcast signal (Figure 8, Col. 10 lines 52 – 67, 11 lines 1 – 3) and a recording step for recording the broadcast signal when an incoming or outgoing call is detected by said call detection step or when a failure of receiving said broadcast signal is detected by said receiving failure detection step (Figure 8, Col. 10 lines 52 – 67, 11 lines 1 – 3).

Engstrom does not teach a receiving failure detection step for detecting a failure to receive said broadcast signal during receiving of the broadcast.

Cahill teaches a receiving failure detection step for detecting a failure to receive said broadcast signal during receiving of the broadcast (Col. 7 lines 17 – 35, lines 47 – 52, when there is fading there can be a failure to receive the broadcast signal).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Engstrom with the failure detection method of Cahill for the purpose of providing optimal receiver performance during fading conditions as taught by Cahill.

Regarding Claim 2, Engstrom in view of Cahill teaches all of the claimed limitations recited in Claim 1. Engstrom further teaches a call termination detection step for detecting termination of call of mobile communication (Figure 8, Col. 10 lines 52 – 67, 11 lines 1 – 3) and a recording stop step for stopping recording of said broadcast signal when termination of call of mobile communication is detected in said call termination detection step or recovery of broadcast signal reception is detected in said recovery detection step (Figure 8, Col. 10 lines 52 – 67, 11 lines 1 – 3). Cahill

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further teaches a recovery detection step for detecting recovery of the broadcast signal reception (Col. 7 lines 17 – 35, the loop will speed up during signal recovery, the signal will be recovered when there is exiting of a fade).

Regarding Claim 3, Engstrom in view of Cahill teaches all of the claimed limitations recited in Claim 2. Engstrom further teaches a playback step for playing back said recorded broadcast signal information, when recording of said broadcast signal is stopped by said recording stop step (Col. 10 lines 36 – 39, lines 52 – 67, 11 lines 1 – 3).

Regarding Claim 4, Engstrom in view of Cahill teaches all of the claimed limitations recited in Claim 1. Engstrom further teaches wherein in said recording step said broadcast signal is recorded in a recording device installed in said terminal device (Col. 10 lines 52 – 67, 11 lines 1 – 3).

Regarding Claim 22, Engstrom in view of Cahill teaches all of the claimed limitations recited in Claim 1. Engstrom further teaches a program for implementing the broadcast recording method (Col. 8 lines 46 – 50, typical mobile phones and PDAs comprise a processor that controls the functions of said mobile phone and PDA, said processor uses a program to operate).

Regarding Claim 23, Engstrom in view of Cahill teaches all of the claimed limitations recited in Claim 22. Engstrom further teaches a recording medium holding a program for implementing the broadcast recording method (Col. 8 lines 46 – 50, typical mobile phones and PDAs comprise a processor that controls the functions of said

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mobile phone and PDA, said processor uses a program to operate, said program is stored in memory, which is a recording medium).

Regarding Claim 31, Engstrom teaches all of the claimed limitations recited in Claim 28. Engstrom does not teach detecting the need for recording a broadcast program by detecting at least one abnormal terminal status due to radio wave difficulties occurring in said mobile communication device, insufficient recording capacity, or worn batteries after terminal status information is received in said terminal status information receiving step.

Cahill teaches detecting at least one abnormal terminal status due to radio wave difficulties (Col. 7 lines 17 – 35, lines 47 – 52, when there is fading there will be radio wave difficulties).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Engstrom with the detection method of Cahill for the purpose of providing optimal receiver performance during fading conditions as taught by Cahill.

8. Claims 5 – 7, 11 – 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Engstrom (US 7,065,333) in view of Cahill (5,150,384), as applied to Claim 1 above, and further in view of Koyakata (JP 2002185900).

Regarding Claim 5, Engstrom in view of Cahill teaches all of the claimed limitations recited in Claim 1. Engstrom in view of Cahill does not teach wherein in said

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recording step said broadcast signal is recorded in a recording device installed in an external recording server.

Koyakata teaches wherein a broadcast signal is recorded in a recording device installed in an external recording server (Figure 1, Abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Engstrom in view of Cahill with the external recording server of Koyakata for the purpose providing a flexible broadcast recording capability thus enabling a user to record and receive distribution of a desired broadcast without being restricted to a particular location as taught by Koyakata.

Regarding Claim 6, Engstrom in view of Cahill and in further view of Koyakata teaches all of the claimed limitations recited in Claim 5. Koyakata further teaches wherein the broadcast signal is recorded in a recording device installed in an external recording server (Figure 1, Abstract). Cahill further teaches detection of the failure to receive a broadcast signal (Col. 7 lines 17 – 35, lines 47 – 52, when there is fading there can be a failure to receive the broadcast signal).

Regarding Claim 7, Engstrom in view of Cahill and in further view of Koyakata teaches all of the claimed limitations recited in Claim 5. Engstrom further teaches the impossibility of recording said broadcast signal in a recording device installed in said terminal device (Col. 8 lines 46 – 50, lines 63 – 65, typical data stores in PDAs have limited space thus when the data store is full future broadcast data cannot be recorded). Koyakata further teaches wherein the broadcast signal is recorded in a recording device installed in an external recording server (Figure 1, Abstract).



Regarding Claim 11, Engstrom teaches all of the claimed limitations recited in Claim 10. Engstrom does not teach wherein said device sends a command signal to record currently received broadcast signals on an external recording server when it is detected that said broadcast signal can not be received.

Cahill teaches detecting that said broadcast signal cannot be received (Col. 7 lines 17 – 35, lines 47 – 52, when there is fading there can be a failure to receive the broadcast signal).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Engstrom with the failure detection method of Cahill for the purpose of providing optimal receiver performance during fading conditions as taught by Cahill.

Engstrom in view of Cahill does not teach wherein said device sends a command signal to record currently received broadcast signals on an external recording server.

Koyakata teaches wherein said device sends a command signal to record currently received broadcast signals on an external recording server (Figure 1, Abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Engstrom in view of Cahill with the external recording server of Koyakata for the purpose providing a flexible broadcast recording capability thus enabling a user to record and receive distribution of a desired broadcast without being restricted to a particular location as taught by Koyakata.

Regarding Claim 12, Engstrom teaches a communication device comprising: a broadcast signal receiving portion for receiving the broadcast signal (Col. 8 lines 53 – 55); a receiving signal recording portion for recording the broadcast receiving information acquired from the broadcast signal (Figure 8, Col. 10 lines 52 – 67, 11 lines 1 – 3), an incoming-outgoing call detector portion for detecting an incoming or outgoing call, or termination of a call (Figure 8, Col. 10 lines 52 – 67, 11 lines 1 – 3); and a recording-start/recording-stop/playback command information generator portion for generating the recording-start, recording-stop, and playback-command information (Figure 8, Col. 10 lines 36 – 39, lines 52 – 67, 11 lines 1 – 3), wherein the recording-start/recording-stop/playback command information generator portion sends recording command information for the broadcast signal when an incoming or outgoing call is detected by the incoming-outgoing call detector portion and/or notifies the receiving signal recording portion about the broadcast signal recording command information (Figure 8, Col. 10 lines 52 – 67, 11 lines 1 – 3).

Engstrom does not teach a receiving-status detector portion for detecting the broadcast signal receiving status wherein the recording-start/recording-stop/playback command information generator portion sends recording command information for the broadcast signal to an external recording server via a communication network when a broadcast signal receiving failure is detected by the receiving-status detector portion, and sends the recording command information for the broadcast signal to an external recording server via a communication network when an incoming or outgoing call is

detected by the incoming-outgoing call detector portion and/or notifies the receiving signal recording portion about the broadcast signal recording command information.

Cahill teaches a receiving-status detector portion for detecting the broadcast signal receiving status and said receiving-status detector detecting a broadcast signal receiving failure (Col. 7 lines 17 – 35, lines 47 – 52, when there is fading there can be a failure to receive the broadcast signal).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Engstrom with the failure detection circuitry of Cahill for the purpose of providing optimal receiver performance during fading conditions as taught by Cahill.

Engstrom in view of Cahill does not teach wherein the recording-start/recording-stop/playback command information generator portion sends recording command information for the broadcast signal to an external recording server via a communication network.

Koyakata teaches wherein the recording-start/recording-stop/playback command information generator portion sends recording command information for the broadcast signal to an external recording server via a communication network (Figure 1, Abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Engstrom in view of Cahill with the external recording server of Koyakata for the purpose providing a flexible broadcast recording

capability thus enabling a user to record and receive distribution of a desired broadcast without being restricted to a particular location as taught by Koyakata.

Regarding Claim 13, Engstrom in view of Cahill and in further view of Koyakata teaches all of the claimed limitations recited in Claim 12. Engstrom further teaches wherein said recording-start/recording-stop/playback command information generator portion sends recording command information for the broadcast signal when said incoming-outgoing call detector portion detects an incoming or outgoing call (Figure 8, Col. 10 lines 52 – 67, 11 lines 1 – 3) and also that said receiving signal recording portion cannot perform recording (Col. 8 lines 46 – 50, lines 63 – 65, typical data stores in PDAs have limited space thus when the data store is full future broadcast data cannot be recorded). Koyakata further teaches sending the recording command information for the broadcast signal to the external recording server over a communication network (Figure 1, Abstract).

Regarding Claim 14, Engstrom in view of Cahill and in further view of Koyakata teaches all of the claimed limitations recited in Claim 12. Engstrom further teaches wherein said recording-start/recording-stop/playback command information generator portion sends recording stop command information on the broadcast signal when termination of a call is detected by said incoming-outgoing call detector portion and/or reports the recording stop information for the broadcast signal to said receiving signal recording portion (Figure 8, Col. 10 lines 52 – 67, 11 lines 1 – 3). Cahill further teaches restoration of broadcast signal reception is detected by said receiving status detector portion (Col. 7 lines 17 – 35, the loop will speed up during signal recovery or

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restoration, the signal will be recovered when there is exiting of a fade). Koyakata further teaches sending recording stop command information on the broadcast signal to the external recording server over the communication network (Figure 1, Abstract), a playback information receiving portion for receiving playback information from the recording server over the communication network; and a playback portion for playing back said playback information (Figure 1, Abstract).

Regarding Claim 15, Engstrom in view of Cahill and in further view of Koyakata teaches all of the claimed limitations recited in Claim 12. Engstrom further teaches wherein said recording-start/recording-stop/playback command information generator portion sends recording/playback command information when there is a recording stop command information for the broadcast signal (Figure 8, Col. 10 lines 52 – 67, 11 lines 1 – 3) and reports the recording/playback information when said recording stop command information for the broadcast signal is reported to said receiving signal recording portion (Figure 8, Col. 10 lines 52 – 67, 11 lines 1 – 3). Koyakata further teaches sending recording stop command information on the broadcast signal to the external recording server.

Regarding Claim 16, Engstrom in view of Cahill and in further view of Koyakata teaches all of the claimed limitations recited in Claim 12. Engstrom further teaches wherein said recording/playback information contains as a playback time the time from generating of said recording command information to the time when aid recording stop information is generated (Figure 8, Col. 10 lines 52 – 67, 11 lines 1 – 3, the portion that is played back is the portion from the point of interruption to the ending of the

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recording, which is also the ending of the interruption, this portion has a time period associated with it).

9. Claims 8, 18 – 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koyakata (JP 2002185900) in view of Cahill (5,150,384).

Regarding Claim 8, Koyakata teaches an information terminal device comprising a broadcast signal receiving function and a communication function, wherein said device transmits a command signal for recording a currently received broadcast signal in an external server (Figure 1, Abstract).

Koyakata does not transmitting a command signal for recording a currently received broadcast signal in an external server when it is detected that the broadcast signal cannot be received.

Cahill teaches detecting that the broadcast signal cannot be received (Col. 7 lines 17 – 35, lines 47 – 52, when there is fading there can be a failure to receive the broadcast signal).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Koyakata with the failure detection method of Cahill for the purpose of providing optimal receiver performance during fading conditions as taught by Cahill.

Regarding Claim 18, Koyakata teaches a broadcast recording system comprising a recording server containing a recording device and an information terminal device having broadcast signal functions and communication functions (Figure 1, Abstract),

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wherein said recording server records the broadcast information being received by said information terminal device (Figure 1, Abstract)

Koyakata does not teach wherein said recording server records the broadcast information being received by said information terminal device when failure of receiving is detected during receiving of said broadcast signal by said information terminal device.

Cahill teaches failure of receiving is detected during receiving of said broadcast signal by said information terminal device (Col. 7 lines 17 – 35, lines 47 – 52, when there is fading there can be a failure to receive the broadcast signal).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mobile devices of Koyakata with the failure detection circuitry of Cahill for the purpose of providing optimal receiver performance during fading conditions as taught by Cahill.

Regarding Claim 19, Koyakata in view of Cahill teaches all of the claimed limitations recited in Claim 18. Koyakata further teaches wherein said recording server stops recording of broadcast information (Figure 1, Abstract, the mobile request a playback thus there will be a point in time when the recording ends). Cahill further teaches the detection of signal reception recovery (Col. 7 lines 17 – 35, the loop will speed up during signal recovery or restoration, the signal will be recovered when there is exiting of a fade).

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10. Claims 9, 20 – 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koyakata (JP 2002185900) in view of Cahill (5,150,384), as applied to Claim 9 above, and further in view of Engstrom (US 7,065,333).

Regarding Claim 9, Koyakata in view of Cahill teaches all of the claimed limitations recited in Claim 8. Koyakata in view of Cahill does not teach wherein the currently received broadcast signal is recorded when an outgoing or incoming call of a communication occurs.

Engstrom teaches wherein the currently received broadcast signal is recorded when an outgoing or incoming call of a communication occurs (Figure 8, Col. 10 lines 52 – 67, 11 lines 1 – 3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Koyakata in view of Cahill with the recording functionality of Engstrom for the purpose of preventing a user from missing any part of a broadcast when an incoming call comes in or an outgoing call is made as taught by Engstrom.

Regarding Claim 20, Koyakata in view of Cahill teaches all of the claimed limitations recited in Claim 18. Koyakata in view of Cahill does not teach wherein said recording server records broadcast information currently received by said information terminal device when said information terminal device starts communicating during receiving of broadcast signals.



Engstrom teaches the recording of broadcast information currently received by said information terminal device when said terminal device starts communicating during receiving of broadcast signals (Figure 8, Col. 10 lines 52 – 67, 11 lines 1 – 3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Koyakata in view of Cahill with the recording functionality of Engstrom for the purpose of preventing a user from missing any part of a broadcast when an incoming call comes in or an outgoing call is made as taught by Engstrom.

Regarding Claim 21, Koyakata in view of Cahill teaches all of the claimed limitations recited in Claim 18. Koyakata in view of Cahill does not teach wherein said recording server stops recording of the broadcast information when the communication on said terminal information device ends.

Engstrom teaches the stopping of recording of the broadcast information when the communication on said terminal information device ends (Figure 8, Col. 10 lines 52 – 67, 11 lines 1 – 3).


It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Koyakata in view of Cahill with the recording functionality of Engstrom for the purpose of preventing a user from missing any part of a broadcast when an incoming call comes in or an outgoing call is made as taught by Engstrom.


**Conclusion**

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond S. Dean whose telephone number is 571-272-7877. The examiner can normally be reached on Monday-Friday 6:00-2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban can be reached on 571-272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Raymond S. Dean  
June 21, 2006

  
EDWARD F. URBAN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600